

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant: Liang-Chy Chien, et al.

International Application No.: PCT/US2004/015411

International Filing Date: 17 May 2004

Title: METHOD OF PLASMA BEAM BOMBARDMENT
OF ALIGNING FILMS FOR LIQUID CRYSTALS

Agent's Reference No.: KENT-B-PCT-US

Date: 14 October, 2005

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This invention relates to methods for treating aligning substrates produces uniform alignment of liquid crystals in at least two modes. The method is based on the treatment of liquid crystal aligning substrates with a collimated or partially collimated plasma beam. In one embodiment, the method comprises a step of bombarding an aligning substrate with at least one plasma beam from a plasma beam source at a designated incident angle to align the atomic/molecular structure or the surface profile of the aligning substrate in at least one aligned direction.

As authorized and encouraged under 37 C.F.R. §1.97-1.99, applicant hereby cites as a means of complying with the duty of disclosure set forth in 37 C.F.R. §1.56, the following patents and/or documents, required copies enclosed, which the Examiner should consider with respect to the above-identified United States Patent Application:

U.S. DOCUMENTS		
PATENT/DOCUMENT NO.	DATE	INVENTOR/ASSIGNEE
5,973,447	10/26/1999	Daniels, et al.
6,195,146	02/27/2001	Chaudhari, et al.
2002/186336	12/12/2002	Chaudhari, et al.
FOREIGN DOCUMENTS		
PATENT/DOCUMENT NO.	DATE	COUNTRY
07056172	03/03/1995	JP Abstract
09281499	10/31/1997	JP Abstract
09230351	09/05/1997	JP Abstract

In accordance with 37 CFR 1.98(a)(2)(i) only the foreign and non-patent documents are required for the express purpose of providing the Patent and Trademark Office with an ample opportunity to evaluate the same and to arrive at an independent assessment of its materiality, if any, with regard to the examination of the application.

An examination of the present application considering the above documents is requested.

Respectfully submitted,

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Attorney Docket No.: FMW-CA-PCT-US

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Form PTO-1449 U.S. Department of Commerce Patent and Trademark Office			Atty. Docket No.: KENT-B-PCT-US	Serial No.: 10/553326			
LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary)			Applicant: Liang-Chy Chien, et al.				
			Filing Date: October 14, 2005	Group:			
U.S. PATENT DOCUMENTS							
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing date if appropriate
/T.D./	AA	5,973,447	10/26/1999	Daniels, et al.			
/T.D./	AB	6,195,146	02/27/2001	Chaudhari, et al.			
/T.D./	AC	2002/186336	12/12/2002	Chaudhari, et al.			
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FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation Yes No
/T.D./	AL	07056172	03/03/1995	JP Abstract			X
/T.D./	AM	09281499	10/31/1997	JP Abstract			X
/T.D./	AN	09230351	09/05/1997	JP Abstract			X
	AO						
	AP						
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
	AR						
	AS						
	AT						
EXAMINER	/Tai Duong/		DATE CONSIDERED	12/05/2008			
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							